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RIDE THE
DISRUPTION
OR BE DISRUPTED

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Businesses are at a critical juncture. Disruption is here, and it's only going to get faster and messier. What businesses do over the next couple of years will decide their fate. Will they become industry leaders or remain a bygone?

More than 52% of companies from 2000's Fortune 500 list are gone.

But, before we get into the what of disruption, let's dig into why it's happening. Why are businesses being disrupted? And can they insure themselves against this and upcoming disruptions, to become leaders of their space?

10 year disruption cycle

Based on past data, disruption follows a ten year pattern. Every decade, new trends take off and new businesses come riding in to challenge the status quo.



Mainframe
Computer
1960s



Mini
Computer
1970s



Personal
Computer
1980s



Desktop Internet
Computing
1990s



Mobile Internet
Computing
2000s



Wearables
2010s

Disruptive technologies

Now, let's delve a little deeper, closer to when we are at. Just the last twenty years have been phenomenally packed with change and impact. Also notable is that technology trends inevitably propel related innovations around them.

First Wave 1997 - 2006



- Emergence of Google, Yahoo, Paypal, Amazon, eBay and Facebook
- First movers of the digital age leveraged internet and browsers
- The dot-com bubble (website growth and penetration) is in full swing and primarily driven by the overenthusiastic capital, that supported the disruption
- Mid 90s to mid 2000s saw the number of registered domains rise from, less than 10,000 to more than 25 million
- The disruption caused a shift in wealth - from the old economy to digital
- Age of low entry barrier began - barely any physical assets but millions made in valuation, simply based on IP

Second Wave

2007 - 2016



- Instagram, WhatsApp, Airbnb, Uber, Dropbox, Spotify came into existence
- Digital photography and mobile tech disrupted Kodak's camera film
- Yahoo, often referred to as 'homepage of the internet' lost out, when focused disruptors launched very specific offerings. e.g. Google Search and Facebook Ads
- Rise of Android and iOS
- Emergence of cloud and mobile

Third Wave

2017 - 2026



- The current 10 year cycle begins
- Prominent technology themes could be Artificial Intelligence, AI or big data or wearables or robotics

Lead, adapt or be disrupted

Leaders of existing businesses should plan to lead the next technology wave because businesses that do not adapt are disrupted.

Yahoo was sold for a fraction of its peak value. Why? Because, during the last decade, while cloud and mobile were trending themes, Yahoo ignored the call to adapt. Similarly, Blockbuster, a leading video rental store went bankrupt because they did not adapt to the cloud opportunity.

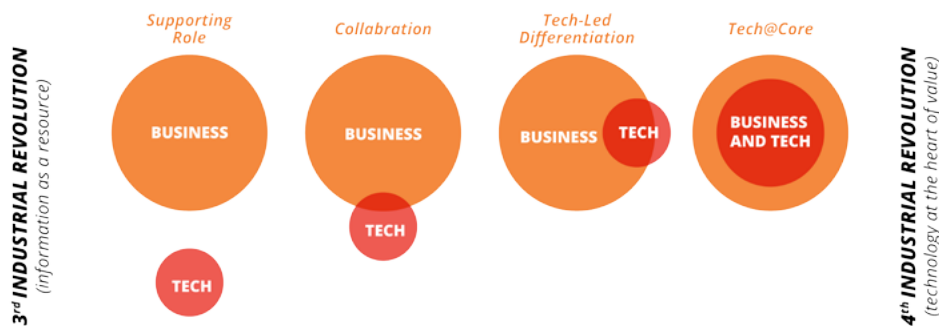
Existing companies flourished by leading some of these disruptions. Amazon introduced Amazon Web Services, AWS in 2006 but are known to have been investing in cloud technology since 2002.

Google invested in and acquired Android in 2005. Alongside heavy interest in mobile technology, Google was also investing in the cloud and in 2006, launched Google Apps, its cloud offering. Moral of the story: In stark contrast to their competitors, Google not only survived the disruption, but also lead the next decade of change.

Disruptors aside, let's talk about the Fast Adopters. Sometimes, even multi billion dollars are not enough to help a business survive. What works is adapting to change and while fast adopters don't lead change, they are quick to adapt. Facebook, a fast adopter was facing a crisis by 2010, because of not taking advantage of both, cloud and mobile tech. However, the social platform adapted quickly by designing their app to be amongst the best on mobile devices. They also acquired WhatsApp and Instagram, ensuring their lead.

Microsoft was late to the game and lost out on the mobile OS race. But, they turned fast adapter and took to cloud tech, opening up their suite of offerings. They followed DropBox with OneDrive and Amazon's AWS with Azure. While they might not be at the head of the pack, they did survive the disruption.

How did technology get so important?



The above visual depicts the evolving relationship of technology and businesses. The early 1970s, or the beginning of the third industrial revolution, saw technology play a supporting role to business IT. Fast forward to the last 40 years, and technology has graduated to a collaborative role in designing business differentiators. Finally, the last decade sees technology take position at the core of every successful business.

Interestingly, The World Economic Forum is calling this the Fourth Industrial Revolution, where [technology is at the core of every business](#). Such digitization means that technology is no longer just an enabler, but if implemented and adopted well, it could be a strategic asset for the business.

How is this decade of disruption shaping up?

Before the start of a disruption cycle, there is usually a diversification of bets being made on different technology themes. These investment cycles typically begin two to three years before a trend really takes off. Out of the many trends/themes of interest, a couple of them find market adoption, while the others either go through incremental changes or don't see adoption at all.

In 2005, interesting technologies such as cleantech and nanotechnology began receiving attention. And it was only by 2009 - 10 that a clear winner emerged; cloud and mobile technology.

Between 2015 - 17, the strongest technologies that emerged were AI and data, with several viable use cases like autonomous vehicles, self-learning algorithms and more.

In more recent times, augmented reality and blockchain are seeing interest. In this chaotic environment, how do business leaders identify the right trend to invest in?

Tracking the disruptive landscape

A key method for businesses to better leverage technology trends is by mapping the important ones. ThoughtWorks has designed a framework that plots such trends and their impact, across domains.

The Disruption Framework

Start / Build			
Experiments			
Research only			
	SEEING NOW	BEGINNING TO BE SEEN	ON THE HORIZON

The first column maps current trends. The second indicates what's beginning to gather attention and will see growth. The third column looks at trends that are on the horizon, and should be kept an eye on.

Interesting is how each trend is also mapped to their level of impact. For example, some trends might lend themselves to immediate action, while others might require experimentation before implementation. And, the last category refers to technologies that will require a lot of groundwork - building a perspective, further investigating through research etc.

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Given the dynamic business environment, successful leaders of the digital era are those who constantly assess new opportunities for their technology driven businesses.

ThoughtWorks has reviewed technology trends, and captured the five Seismic Shifts that will radically change how people interact with technology, how businesses will evolve to incorporate machine intelligence, and how these systems will be created and run.

The [full report](#) breaks down the five seismic shifts in business and technology, which will help business leaders prepare for the momentous changes to come. Here is a snapshot:

EVOLVING INTERACTIONS	<i>We advance from screen-and-keyboard to true 'multi-modal' interaction, moving fluidly between speech, gesture, tactile and vmixed reality interfaces.</i>
HUMANITY, AUGMENTED	<i>Intelligent machine learning and narrow AI make humans smarter at the work we do. In the future, humans and machines will focus on their strengths and collaborate even more.</i>
RISE OF THE PLATFORMS	<i>We should look beyond platforms for delivery, and unlock business innovation, where the businesses themselves are a platform through an API ecosystem.</i>
SECURITY, PRIVACY, TRANSPARENCY	<i>Disjointed security efforts and 'silver bullet' solutions aren't working. The new approach is that, 'security is everyone's problem.'</i>
RISE OF THE ROBOTS	<i>The Robots are coming and machines are set to displace vast numbers of human jobs. This disruption will include blue collar and jobs that require vast intellectual capacity too.</i>

Given the overview, let's look at a few examples relevant to this report; a camera application called [BeautyPlus](#) combines AI and Virtual Reality, VR making it a perfect photo retouch app. We also have the proliferation of 'assistants' such as [Alexa](#) from Amazon, [Siri](#) from Apple or [OK Google](#) that recognizes human speech as a legitimate form of input.

Tesla's revolutionary launch of [self driving cars](#) detect obstructions, lanes and road signs using a mix of computer vision and machine learning. While driving, the driver can attend a video call that employs 4G technology. Subsequently, [5G](#) tech is a definite reality which means the next generation may never have to see a buffering screen, in their lifetimes.

Now, some of the great questions that ThoughtWorks expects from a group of [Courageous Executives](#) would be -

- How will traditionally non-digital companies use digital technologies?
- What's new in the e-commerce or retail industry?
- What's new in the media and entertainment industry?
- How does the adoption for IoT and wearables look, in the coming decade?
- Will technology solve problems across socio-economic barriers, on a much wider scale?

Conclusion

Most of the technologies mentioned in the later half of this article, are in their infancy. As they mature, their adoption will skyrocket bringing in a range of new companies offering original products and services.

Given that businesses don't have the luxury of time (that their predecessors might have enjoyed), leaders need to take their cues from both, the seismic shifts and the start-up space. The latter, because there is a high probability of an unknown start-up disrupting larger enterprises. Apart from regular operations, large companies should invest in newer tech, set up innovation labs, roll out experiments, fail fast and quickly adapt.

As for what lies ahead, we can look at some key technology players for definite hints - Apple and Google, amongst others are investing in autonomous cars. Amazon, Google and Apple are investing in voice based interaction. Facebook and Microsoft are investing in virtual reality with Oculus and Hololens. Cryptocurrency and blockchain have been in the news for a while, with several start-ups innovating around financial tech.

I, for one am very excited about the myriad of possibilities for the future!



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Rashmi has around 13 years of experience as an entrepreneur and as a product manager in consumer internet space. He has worked on real estate, food tech, travel, social and eCommerce applications. Rashmi's special interest lies in the growth of the product and product funnels.

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